

Amendments to the Claims:

1 - 11. (Canceled)

12. (Previously Presented) An absorbent polymer structure (Pa), comprising an inner portion as well as an outer portion surrounding the inner portion, wherein the inner portion comprises a crosslinked polymer and the outer portion comprises a crosslinked polymer, wherein the polymer of the outer portion is more strongly cross-linked than the polymer of the inner portion, wherein the polymer of the outer portion is surface crosslinked with an aqueous solution comprising a chemical cross-linker, and an inorganic compound comprising silicic acid, and heating the absorbent polymer structure to a temperature of from about 40 to about 300°C, wherein said inorganic compound is at least partly immobilized in the polymer of the outer portion and wherein the absorbent polymer structure (Pa) has a CRC of at least about 26 g/g and a SFC of at least about $60 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$.

13. (Previously Presented) The absorbent polymer structure (Pa) according to claim 12, wherein the absorbent polymer structure has an Absorbency against Pressure (AAP) of at least about 18 g/g under a pressure of about 50 g/cm².

14. (Previously Presented) The absorbent polymer structure (Pa) according to claim 12, wherein the chemical cross-linker comprises ethylene carbonate and the inorganic compound is a condensate of polysilicic acids.

15. (Previously Presented) A composite comprising an absorbent polymer structure (Pa) according to claim 12 and a substrate.

16. (Previously Presented) A process for producing a composite, wherein an absorbent polymer structure (Pa) according to claim 12 and a substrate and optionally an additive are brought into contact with each other.

17. (Previously Presented) A composite obtainable by a process according to claim 16.

18. (Previously Presented) Chemical products, comprising the absorbent polymer structure (Pa) according to claim 12.

19. – 30. (Canceled)

31. (Previously Presented) The absorbent polymer structure (Pa) according to claim 12, wherein the absorbent polymer structure has a CRC from about 26g/g to about 35g/g.

32. (Previously Presented) The absorbent polymer structure (Pa) according to claim 12, wherein the absorbent polymer structure has a SFC from about $60 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$ to about $150 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$.

33. (New) A process for producing an absorbent polymer structure (Pa) by treating an outer portion of an untreated absorbent polymer structure (Pu1), comprising the steps of:

bringing the outer portion of the untreated absorbent polymer structure (Pu1) into contact with an aqueous solution comprising at least one chemical cross-linker and at least one inorganic compound in dispersed colloidal form; and
heating the absorbent polymer structure, of which the outer portion has been brought into contact with the aqueous solution, at a temperature in the range from about 40 to about 300°C, so that the outer portion of the absorbent polymer structure is more strongly cross-linked compared to the inner portion and the inorganic compound is at least partly immobilized in the outer portion of the absorbent polymer structure and wherein the absorbent polymer structure (Pa) has a CRC of at least about 26 g/g and a SFC of at least about $60 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$.

34. (Currently Amended) A process for producing an absorbent polymer structure (Pa) by treating the outer portion of an absorbent polymer structure (Pu2), that has not been treated with an inorganic compound in dispersed colloidal form, comprising the steps of:

bringing the outer portion of the absorbent polymer structure (Pu2) into contact with an aqueous solution comprising at least one chemical cross-linker and at least one inorganic compound in dispersed colloidal form; and
heating the absorbent polymer structure, of which the outer portion has been brought into contact with the aqueous solution, at a temperature in the range from

about 40 to about 300°C, so that the outer portion of the absorbent polymer structure is more strongly cross-linked compared to the inner portion and the inorganic compound is at least partly immobilized in the outer portion of the absorbent polymer structure and wherein the absorbent polymer structure (Pa) has a CRC of at least about 26 g/g and a SFC of at least about $60 \cdot 10^{-7} \text{ cm}^3 \cdot \text{s} \cdot \text{g}^{-1}$.

35. (New) The process according to claim 1, wherein the absorbent polymer structure (Pu1) is based on:

- ($\alpha 1$) about 20 to about 99.999 wt.% of polymerized, ethylenically unsaturated, acidic group-containing monomers or salts thereof or polymerized, ethylenically unsaturated monomers containing a protonated or a quaternary nitrogen, or mixtures thereof,
- ($\alpha 2$) 0 to about 80 wt.% of polymerized, monoethylenically unsaturated monomers which can be co-polymerized with ($\alpha 1$),
- ($\alpha 3$) about 0.001 to about 5 wt.% of one or more cross-linkers,
- ($\alpha 4$) 0 to about 30 wt.% of a water soluble polymer, as well as
- ($\alpha 5$) 0 to about 20 wt.% of one or more additives,

wherein the sum of the component weights ($\alpha 1$) to ($\alpha 5$) amounts to 100 wt.%.

36. (New) The process according to claim 1 wherein the absorbent polymer structure (Pu1) is brought into contact with at most about 20 wt.% of the aqueous solution, based on the weight of the absorbent polymer structure (Pu1).

37. (New) The process according to claim 1 wherein two separate aqueous solutions, of which one contains the chemical cross-linker and the other the inorganic compound in dispersed colloidal form, are brought simultaneously into contact with the absorbent polymer structure (Pu1).

38. (New) The process according to claim 1 wherein at least about 30 wt.% of the inorganic compound in the aqueous solution, with which the outer portion of the absorbent polymer structure (Pu1) is brought into contact, comprises particles with a particle size within a range from about 1 to about 100 nm.

39. (New) The process according to claim 1 wherein the inorganic compound is used in an amount from about 0.001 to about 10 wt.% based on the absorbent polymer structure (Pu1), in the treatment of the outer portion of an absorbent polymer structure (Pu1).

40. (New) The process according to claim 1 wherein particles comprising polysilicic acid are used as inorganic compound.

41. (New) The process according to claim 1 wherein a condensation cross-linker is used as the chemical cross-linker.